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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,739	01/09/2004	James L. Skinner	3174-000020	1193

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EXAMINER

NGUYEN, DANNY

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/754,739	Applicant(s) SKINNER, JAMES L.	
	Examiner Danny Nguyen	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24, 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 8/1/2006 with respect to claims 1, 13, 24 have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claims 10, 11, 19, 20 is withdrawn in view of the newly discovered reference(s) to Holmquest and Chaudhry. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 8, 9, 13, 16, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhry (PN 20030086225) in view of Deines et al (PN 20040169970).

Regarding claims 1, 8, 9, 13, 21-23, Chaudhry discloses a protection circuit (figure 3) comprises a live line (12), a second line (14), a ground line (16), and a surge protector circuit including a first varistor (70), and a gas discharge tube (72) that is non-conductive below trigger voltage and that is conductive above the trigger voltage, wherein the gas discharge tube and the varistor are coupled in series between the second line and the ground, the gas discharge tube being operably to clamp voltage in the surge protector by diverting excess voltage from the second line to the ground, a second varistor (62) connected between the live line and the second line (0015).

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Chaudhry discloses that the GDT (72) may have a trigger voltage of 425 volts, but Chaudhry does not disclose the GDT as claimed. Deines discloses a surge protection device includes a gas discharge tube (24), wherein the trigger voltage of the gas discharge tube is greater than 1230 volts (0011). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the GDT of Chaudhry to incorporate the GDT with the above trigger voltage as disclosed by Deines in order to obtain further protection from high voltage condition.

Regarding claims 5, 16, Chaudhry discloses a fuse (18) that is connected in series with the live line and that creates an open circuit when the current flowing through the fuse exceeds a current threshold of the fuse.

3. Claims 2-4, 12, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhry in view of Deines et al, and Holzenthal, Jr. (PN 2005/0083628).

Regarding claims 2, 14, Chaudhry and Deines disclose all limitations of claim 1 as discussed above, but do not disclose the varistor has a voltage threshold that is less a hi pot test voltage as claimed. Holzenthal discloses a surge protection circuit (20) includes a varistor (TSS circuit) which has a threshold voltage that is less than a hi-pot test voltage and the trigger voltage, the hi pot test voltage is less than the trigger voltage, and the trigger voltage is less than a surge voltage (0016, 0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the varistor of Chaudhry and Deines to incorporate the varistor with the

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test voltage as disclosed by Holzenthal in order to ensure the quality and provide a better protection to the circuit.

Regarding claims 3, 12, Chaudhry discloses a second varistor (62) coupled between the live line and the second line.

Regarding claims 4, 15 Chaudhry discloses when a voltage on the live line exceeds the trigger voltage, the first, second varistors, and the GDT clamp excess voltage between the live line and the second line and clamp excess voltage between the second line and the ground (see figure 3).

4. Claims 6, 7, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhry in view of Deines et al, and Holmquest (USPN 5,619,105). Chaudhry and Deines disclose all limitations of claim 1 as discussed above, but do not disclose a rectifier as claimed. Holmquest discloses a protection circuit (figure 1) comprises a rectifier (D1 to D4) that communicates with the live, second lines, and ground (WHT, BLK, GND) that converts an AC input to a DC output. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the circuit of Chaudhry and Deines to incorporate the rectifier as disclosed by Holmquest in order to rectify the AC input voltage (col. 3, lines 9-10).

5. Claims 10, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmquest in view of Chaudhry. Holmquest discloses a protection circuit (figure 1) comprises a live line (WHT), a second line (BLK), a ground line (GND), a rectifier (D1-D4) that communicates with the live, second lines, and ground that converts an AC input to a DC output, a first capacitor (C2A) that has one end that communicates with a

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first output of the rectifier and an opposite end that communicates with the second line, a second capacitor (C2B) that has one end that communicates with a second output of the rectifier and an opposite end that communicates with the second line, and a surge protector circuit including a first varistor (V1). Holmquest does not disclose the varistor a GDT, and a second varistor as claimed. Chaudhry discloses a protection circuit (such as figure 3) comprises a varistor (70) and a GDT (68) are coupled in series, and a second varistor (62) is coupled between the live line and the second line. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the protection circuit of Holmquest to incorporate the GDT, and the second varistor as disclosed by Chaudhry in order to provide a better protection.

6. Claims 11, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmquest in view of Chaudhry, and Reynolds et al (USPN 5,319,533). Holmquest and Chaudhry disclose all limitations of claim 11 as discussed above, but do not disclose first and second resistors as claimed. Reynolds discloses a protection circuit (figure 4) comprises a rectifier (220), first and second capacitors (C1 and C2) are coupled to the output of the rectifier, and first and second resistors (R1 and R2) are coupled in parallel with the capacitors. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the capacitors of Holmquest and Chaudhry to incorporate the resistors as disclosed by Reynolds in order to balance voltage across the capacitors (col. 11, lines 15-16).

7. Claims 24, 26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzenthal in view of Deines.

Regarding claim 24, Holzenthal discloses a protection circuit (figures 2, 3) comprises providing an electric machine (such as motor) having a live line, a second line, a ground line (0005), connecting a first varistor (TVSS) between the live line and the second line (figure 3), and performing the insulating testing (0017). Holzenthal does not disclose the varistor and a GDT are coupled in series and the GDT has a trigger voltage as claimed. Deines discloses a surge protection device (figures 2, 3) comprises a varistor (26) and the GDT (24) are coupled in series, and the GDT has a trigger voltage that is greater than 1230 volts (0011). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the protection circuit of Holzenthal to incorporate the GDT with the above trigger voltage as disclosed by Deines in order to obtain better protection from high voltage condition.

Regarding claim 26, Holzenthal discloses a surge protection circuit (20) includes a varistor (TSS circuit) which has a threshold voltage that is less than a hi-pot test voltage and the trigger voltage, the hi pot test voltage is less than the trigger voltage, and the trigger voltage is less than a surge voltage (0016, 0017).

8. Claims 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzenthal in view of Deines, and Chaudhry. Holzenthal and Deines do not disclose the a second varistor as claimed. Chaudhry discloses a protection circuit (such as figure 3) comprises a varistor (70) and a GDT (68) are coupled in series, and a second varistor (62) is coupled between the live line and the second line. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the

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protection circuit of Holzenthal to incorporate the second varistor as disclosed by Chaudhry in order to provide a better protection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (571)-272-2054. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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10/13/2006


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